

YO9-99-302
Amendment dated 11/06/2003

09/409,277

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Reply to office action mailed 09/03/2003

The following is a complete listing of all claims in the application, with an indication of the status of each:

Listing of claims:

1 (Original). A computer implemented method of visual representation of programming objects as graphical elements, wherein programming properties of programming objects are reflected through graphical properties of graphical elements, the method comprising the steps of:

detecting a change in a state of a data element representing a programming object in visual representation and shown visually on a display device, wherein the data element represents a programming object as graphical elements and programming properties of programming objects are reflected through graphical element properties;

determining graphical aspect changes that apply to graphical elements of the programming object appropriate for the change in state; and

applying the graphical aspect changes to corresponding graphical elements, wherein the graphical aspect changes include changes in color, position and size.

2 (Currently amended). A computer implemented method as recited in claim 1, wherein determining graphical aspect changes further comprises the steps of:

traversing a list of graphical aspect references to acquire a graphic aspect for the data element, wherein there is a many-to-one relationship between graphical aspect references to ~~graphic aspects~~ and a graphic aspect; and

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for each graphic aspect referenced by the list of graphical aspect references, determining whether the graphic aspect applies to the change in state.

3 (Original). A computer implemented method as recited in claim 1, wherein the visual representation of a first programming object may include other visual representations corresponding to at least one additional programming object logically contained within the first programming object.

4 (Original). A computer implemented method as recited in claim 1, wherein more than one visual representation is defined for a programming object.

5 (Original). A computer implemented method as recited in claim 4, wherein any of the more than one visual representation may be used for the programming object.

6 (Original). A computer implemented method as recited in claim 1, wherein the visual representation for a superclass of a programming object is used as the visual representation for a subclass programming object.

7 (Original). A computer implemented method as recited in claim 6, wherein a visual representation of a superclass of the programming object is used as a visual representation for a subclass of the programming object.

8 (Original). An apparatus for visual representation of programming objects as graphical elements comprising:

a data processing system comprising a display device, an interactive

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device, as in a keyboard, a pointing device, a storage device, and a data processor;

memory coupled to the data processor via a bidirectional bus, wherein the memory includes a first memory section for at least one program and a second memory section for data;

computer code comprising a visual programming language, wherein the computer code is stored in the first memory section, and the computer code detects changes in state information corresponding to a data element and applies graphic aspects to a visual representation of the data element which represents the state change; and

means for displaying the visual representation of a plurality of data elements on the display device.

9 (Original). A machine readable medium containing code for visual representation of programming objects as graphical elements, wherein programming properties of programming objects are reflected through graphical properties of graphical elements, the code implementing the steps of:

detecting a change in a state of a data element representing a programming object in visual representation and shown visually on a display device, wherein the data element represents a programming object as graphical elements and programming properties of programming objects are reflected through graphical element properties;

determining graphical aspect changes that apply to graphical elements of the programming object appropriate for the change in state; and

applying the graphical aspect changes to corresponding graphical elements, wherein the graphical aspect changes include changes in color, position and size.
